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Heart Failure and Cardiomyopathies

SPECKLE TRACKING ECHOCARDIOGRAPHY CAN HELP TO DISTINGUISH NON-COMPACTION FROM HYPERTROPHIC CARDIOMYOPATHY

Poster Contributions
Hall C
Saturday, March 29, 2014, 3:45 p.m.-4:30 p.m.

Session Title: Heart Failure and Cardiomyopathies: Diagnostic, Prognostic and Therapeutic Strategies in Cardiomyopathies
Abstract Category: 12. Heart Failure and Cardiomyopathies: Clinical
Presentation Number: 1147-193

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Background: Over-diagnosing of non-compaction of the left ventricle (LVNC) is reported due to the fact that LVNC shares several morphological features with the more common hypertrophic cardiomyopathy (HCM). However, prognosis and treatment strategy in LVNC is very different from HCM. We aimed to evaluate the potential role of strain echocardiography to distinguish between LVNC and HCM.

Methods: We studied 10 patients with LVNC (age 53±13) and 20 patients with HCM (age 46 ±14), diagnosed by clinical findings, echocardiography and MRI. Global longitudinal strain by echocardiography was calculated from a 16 LV segments model with speckle tracking technique. LV basal and apical longitudinal strains were analyzed separately.

Results: LVEF in LVNC was reduced compared with HCM (40±14% vs. 58±5%, p<0.001). Global longitudinal strain was similar in the two groups (-13.4±2.8% vs. -15.2±4.5%, ns). Patients with LVNC showed worse apical strain compared to HCM (-15.3±2.8% vs. -19.5±4.5%, p =0.01), while there was no difference in basal strain (-12.4±5.5% vs. -12.8 ±2.9 %, ns). HCM showed a deformation gradient from apex to base (-19.5±4.5% vs. -12.8±2.9%, p<0.001), as opposed to a more homogeneously decreased function in LVNC (-15.3±2.8% vs. -12.4±5.5%, ns)(Figure).

Conclusions: This study demonstrated a gradient of reduced function from apex to base in HCM, while function was homogenously reduced in LVNC. These characteristics may help differentiation between these two cardiomyopathies.